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ABSTRACT

The resume of health problems facing the American Indian school child emphasized that health, culture, education, and economics are mutually interdependent and must be evaluated and planned for jointly. Specific health problems discussed include general health, nutrition, fever and chronic illness, hearing, sight, and mental health. Recommendations were that health conditions be evaluated on a community-wide basis; that family-oriented nutrition surveys be done to evaluate nutritional status of Indian communities; that medical histories of each child be evaluated as each preschool or school-age child is given a complete medical examination; that hearing problems should be detected as early as possible and audiometric examination should be done to detect any loss of particular pitch; that each child's vision be evaluated not only by a Snellen chart test but also by ocular measurements to determine if eye deformity exists; and that mental health programs be planned in a comprehensive fashion, by treating not only the individual but the social environment from which he comes. (JB)

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HEALTH FACTORS INFLUENCING

EDUCATION OF AMERICAN INDIANS

A Position Paper
Submitted to
Southwestern Cooperative Educational Laboratory

By
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INTRODUCTION

Health factors influencing education have not, for the most part, been considered a portion of educational planning. The Senate Subcommittee on Indian Education, the Meriam Report, and the Coleman Report, all mention the necessity of coordinating economics, culture, health and education. Education and educational institutions should function within the milieu of other vital community functions. It is in this context, then that Health of Indian youngsters should be considered.

The scope and extent of health programs affecting education of American Indian children has not been adequately explored. It is hoped that some of the health problems will be evaluated. This document does not deal with the entire spectrum of diseases seen in Indian communities, but refers only to those directly affecting education of the child. It should be recognized that debilitating conditions of those responsible for the care of the school age child must also be considered when planning educational programs on a community-wide basis.

HEALTH, GENERAL

The general health status of the community and the family must be considered when planning educational programs. Health status is closely related, but not dependent upon economics when one considers the "poverty culture". In planning educational programs, the level of health status should be considered at several levels:

1) Reservation
2) Community
3) Extended family
4) Nuclear family - parents, siblings, etc.
5) Individual child

In reviewing the health status of a reservation, one should evaluate morbidity and mortality rates. Specifically, analysis of infant mortality should be done by the reservation and by the community. Causes of death should be evaluated into general categories such as: Causes relative to birth and low and high birth weights are extremely hazardous. In the northwest, infants under 4½ pounds and those 8 or more pounds at birth, have 500 times the risk of dying during or shortly after birth.[1] Causes relative to accidental deaths indicate hazards of the environment. Infant deaths from enteric diseases gives some indication of environmental sanitation. Similar evaluations can be made of morbidity rates. Morbidity from diseases such as impetigo, enteric diseases, accidents, alcohol intoxication, etc., lend causes to the social environment that the child is being raised in. The reservation should be divided into communities, and each community evaluated in relation to the entire reservation and other communities.

The extended family, if one exists, should be carefully evaluated. The role and function of each member of the extended family in regard to child rearing should be evaluated. The mental and physical health of those members must be evaluated in order to determine the influence on the child.

The nuclear family should undergo a similar evaluation. Public health nurses normally prepare "family folders" so that children can be evaluated in the context of the family setting.

SPECIFIC HEALTH PROBLEMS

The individual child, or groups of preschool and school age children, should be evaluated. Specific conditions include:

- General health - physical deformaties, etc.
- Nutrition
- Fever and prolonged stress
- Hearing
- Sight
- Mental health

It should be emphasized that evaluation must be done at an early age. Each child should be examined at birth and at regular intervals. The Department of Health, Education and Welfare now has standardized techniques for nutritional surveys which are family based.[2] (See enclosed survey sheet.)

The importance of adequate family nutrition cannot be overemphasized. Two conditions thought not to exist within the continental United States have been described among American Indians:

1) Kwashiorkor
2) Marasmus

Kwashiorkor is attributed to a basic protein and vitamin deficiency. Marasmus is a similar condition but usually also has a carbohydrate deficiency.

The significance of these two conditions are that they occur at a very early age when normal growth of the brain is essential. Without adequate protein building blocks during the critical period of life, the brain of a child forever loses its capacity for normal development. Although USPHS facilities in the southwest report fewer than 20 cases per year,[4] the

significance lies in the undiagnosed or less severe cases. As with any disease we have an epidemiological pyramid:

X	deaths
X X X	ill - hospitalized
X X X X X	ill - not hospitalized
X X X X X X X	exposed to illness
X X X X X X X X X	basic population

Thus, in dealing only with deaths or diagnosed cases we see only the top of the pyramid or the "tip of the iceberg". The number of undiagnosed cases of malnutrition is disturbing to epidemiologist.

Another most important aspect is ears and hearing. It is well established that American Indians have an unusually high incidence (number of new cases per year) and prevelance (number of cases present) of otitis media (middle ear infection). According to recent surveys in the southwest, it has been shown that American Indians have an 8.3% prevelance of chronic otitis media with an additional 13% showing evidence of having had chronic otitis media. This survey consisted of 505 people under 25 years of age.[4,5] A recent unpublished survey of 167 people of all ages on the Umatilla Indian Reservation near Pendleton, Oregon, revealed 8 cases of chronic otitis media with 38 others showing evidence of having had chronic otitis media. The increased prevelance in Oregon may be explained on a basis of sample size, or could, in fact, reflect increased prevelance.

The importance of otitis media lies in adequate hearing ability. Although it is thought that American Indians experience few lasting effects, evaluation has not been done by acceptable audiometric techniques.[4,5] Adequate hearing is necessary for proper language development, particularly within the first 18-36 months of life.

Fevers and prolonged or recurrent illnesses have not been evaluated in the Indians' case. However, indications are that recurrent fever, convulsions and prolonged or recurrent illness may be a cause of epilepsy, brain damage or may impair normal brain development.[6]

Evaluation of eyes and eyesight is extremely important if children are to learn to read properly. Little has been done in this field. A recent unpublished survey of preschool, headstart and first grade children on the Warm Springs Indian Reservation, near Madras, Oregon, revealed that 80% of these children were myopic (near sighted) due to an astygmatic condition (distorted vision) and due to an abnormality of occular formation (deformed eyeball). It is theorized that these children are fitted with glasses at an early age to correct myopia. The eye, it is thought, further compensates by becoming more myopic. Soon a cycle of progressive myopia needing repeated refractive correction is established. Warm Springs children have been fitted with bifocals with the hope of overcoming this problem. It is much too early to evaluate results.[7]

The last, and perhaps most important aspect, is mental health. Adequate mental health is dependent on many other factors in the community and school. Unhealthy mental health status can be evaluated by examining the results in terms of:

- school drop-out
- use of alcohol
- use of drugs
- suicides
- vandalism and lawlessness

By evaluating these symptoms, one can project the extent of mental health problems in the community.

Dr. E. S. Rebeau, former director of the Indian Health Service, labeled alcoholism as the Indians number one health problem. Medical consultants state that abnormal alcohol usage is but a symptom of underlying problems.[8] As of this date no worthwhile evaluation of the alcohol problem has been done by anyone, in this author's opinion.

National institutes of health have done some work with the Northern Cheyenne and the Shashone-Bannocks of Fort Hall. Each of these locations have a high suicide rate for school-age children. At Fort Hall USPHS treats over 400 suicide attempts per year. At Taholah, Washington, teenage suicides occurred in group or pact form until 1967.[9]

Mental health problems are grave. Many have expounded at length on the problems but have emerged with few solutions. Some of the contributing factors include:

1) Split nuclear and extended families.
2) Use of alcohol (use of alcohol splits families -- creates more family disharmony, which contributes to more alcohol usage).
3) Demolished community and tribal life.
4) Destruction of religious base of tribe.
5) Low socio-economic level.
6) Low self-image, lack of pride, and self-respect.
7) Discrimination
8) Boarding school environment.
9) Others -- hopelessness, uselessness, alienation, etc.

In order to deal with mental health problems, it is clearly evident that educators and educational institutions cannot be expected to solve the problems. The best that can be hoped for is for the educational institutions to not be contributing to greater mental health problems. Perhaps through cooperation with economic development, improvement in health status, improvement in culture, and educational institutions can be of some assistance.

RECOMMENDATIONS

1. Health conditions should be evaluated on a community-wide basis. Every member of the population should have a complete physical examination and laboratory tests--not only the school age and pre-school age child.
2. A family oriented nutrition survey should be done to evaluate nutritional status of the community.
3. Medical histories of each child should be evaluated as each pre-school or school age child is given a complete medical examination.
4. Hearing problems should be detected as early as possible. A physical examination of the ears is not adequate in itself. Audiometric examination should be done to detect any loss of particular pitch.
5. Each child should have his vision evaluated to include not only a Snellen chart test, but should also have occular measurements to determine if a deformity of the eye exists. Treatment can then be planned accordingly.
6. Mental health programs should be planned in a comprehensive fashion, by treating not only the individual, but the social environment from which he comes. Too often specific symptoms such as alcoholism or alienation is concentrated upon. This approach may require some change in attitude of the various institutions now dealing with problems of American Indians.

SUMMARY

A resume of health problems facing the American Indian school child is discussed. It is emphasized that health, culture, education and economics are mutually interdependent and must be evaluated and planned jointly. Specific health problems discussed include:

1) General Health
2) Nutrition
3) Fever and Chronic Illness or Recurrent Illness
4) Hearing
5) Sight
6) Mental Health

References

1. Data compiled by Northwest Regional Educational Laboratory.

2. Survey sheet enclosed.

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